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**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB/T 51232-2016**

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**Technical standard for assembled buildings with steel-structure**

装配式钢结构建筑技术标准

**Issued on: January 10, 2017**

**Implemented on: June 1, 2017**

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**Issued by: State Administration for Market Regulation;  
Standardization Administration of the PRC**

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### 1 General provisions

1.0.1 The document was drawn up to regulate the construction of assembled buildings with steel structure in China, following the requirements of suitability, economy, safety, green performance and good appearance, and to raise across the board the environmental, social and economic benefit of such buildings.

1.0.2 It applies to the design, production and transport, construction and erection, quality acceptance and use and maintenance of assembled buildings with steel structure with a seismic fortification intensity from 6 degrees to 9 degrees.

1.0.3 Assembled buildings with steel structure shall follow the principle of sustainability over the whole life of the building, and shall have standardized design, factory production, assembled construction, integrated fitting-out, information-based management and intelligent application.

1.0.4 Assembled buildings with steel structure shall integrate the structure system, the building envelope system, the facility and pipeline system and the interior decoration system, so that the building function is complete and the performance good.

1.0.5 Apart from this standard, the design, production and transport, construction and erection, quality acceptance and use and maintenance of assembled buildings with steel structure shall also comply with the relevant provisions of the national standards currently in force.

## 2 Terms

2.0.1 assembled building - building in which the main parts of the structure system, the building envelope system, the facility and pipeline system and the interior decoration system are integrated from prefabricated parts and components.

2.0.2 assembled building with steel-structure - assembled building whose structure system is made up of steel parts and members.

2.0.3 integration of building systems - process by which, on the basis of the assembled manner of building, the planning, design, production and construction are coordinated as a whole so that the structure system, the building envelope system, the facility and pipeline system and the interior decoration system of the building are made one.

2.0.4 integrated design - design that makes one whole of the structure system, the building envelope system, the facility and pipeline system and the interior decoration system of the building.

2.0.5 collaborative design - integrated design in which, in the design of an assembled building, the architectural, structural, mechanical and fitting-out disciplines work together and information technology is used to meet the requirements of building design, production and transport, construction and erection and the like.

2.0.6 structure system - whole assembled from structural members through reliable connection methods so as to carry or transfer the action of loads.

2.0.7 building envelope system - whole made up of parts and components such as the external walls, the roof, the external doors and windows and others, used to separate the indoor from the outdoor environment of the building.

2.0.8 facility and pipeline system - whole made up of the equipment and pipelines of water supply and drainage, heating, ventilation and air conditioning, electrical and intelligent systems and gas, meeting the functional use of the building.

2.0.9 interior decoration system - whole made up of the floor surfaces, wall surfaces, lightweight partition walls, suspended ceilings, internal doors and windows, kitchen and bathroom and the like, meeting the requirements for the use of the building space.

2.0.10 component - collective name for the structural members and other members that make up the structure system of the building and are produced and made in advance in a factory or on site.

2.0.11 part - collective name for the functional units assembled from single building products or composite products produced in a factory, which make up the building envelope system, the facility and pipeline system and the interior decoration system.

2.0.12 decorated - state in which the fixed surface finishing of all functional spaces and the installation of all equipment and facilities are complete, so that the functional use and the performance of the building are attained.

2.0.13 assembled decoration - manner of fitting out in which interior parts produced in a factory are assembled and installed on site by non-wet construction.

2.0.14 non-wet construction - method of building carried out by dry working.

2.0.15 module - unit in a building that is relatively independent, has a particular function and can be interchanged generally.

2.0.16 standardized interface - interface that has uniform dimensional specifications and parameters and satisfies tolerance fitting and modular coordination.

2.0.17 integrated kitchen - kitchen assembled mainly by non-wet construction from integrated factory-produced floor, suspended ceiling, wall surfaces, cabinets, kitchen equipment and pipelines.

2.0.18 integrated bathroom - bathroom assembled mainly by non-wet construction from integrated factory-produced floor, wall surfaces or panels, suspended ceiling, sanitary fittings, equipment and pipelines.

2.0.19 system cabinet - modular part produced in a factory and assembled on site, meeting storage needs.

2.0.20 assembled partition wall, ceiling and floor - partition walls, suspended ceilings and floors assembled mainly by non-wet construction from factory-produced integrated parts that have sound insulation, fire protection, damp-proofing and other properties and that satisfy the spatial function and aesthetic requirements.

2.0.21 pipe and wire detached from structure system - manner in which the equipment and pipelines are placed outside the structure system.

2.0.22 same-floor drainage - manner of drainage in a building drainage system in which the appliance drain pipes and the drainage branch pipes do not pass through the structural floor of the storey into the space below, but are laid on the same floor as the sanitary appliances and connected into the drainage stack.

2.0.23 steel frame structure - structure with shear and bending capacity, formed by rigidly connecting steel beams to steel columns or to concrete-filled steel tubular columns.

2.0.24 steel braced frame structure - structure made up of a steel frame and steel bracing members, able to carry vertical and horizontal actions together; steel bracing is divided into

concentric bracing, eccentric bracing and buckling-restrained bracing, among others.

2.0.25 steel frame structure with refined ductility shear wall - structure made up of a steel frame and ductile wall panel members, able to carry vertical and horizontal actions together; ductile wall panels include stiffened steel plate shear walls and concrete shear walls with vertical slits, among others.

2.0.26 staggered truss framing structure - structure in which plane trusses are placed at each storey on each transverse axis of the building and are staggered on adjacent axes.

2.0.27 composite slabs with steel bar truss deck - composite slab formed by casting concrete on a steel bar truss deck.

2.0.28 composite slabs with profiled steel sheet - composite slab formed by casting concrete on profiled steel sheet.

2.0.29 light-weight building with gabled frames - single-storey building structure whose load-bearing structure uses solid-web rigid frames of varying or constant cross section.

2.0.30 low-rise cold-formed thin-walled steel buildings - low-rise building structure with cold-formed thin-walled steel sections as the main load-bearing members, of not more than 3 storeys and with an eaves height of not more than 12 m.

### 3 Basic requirements

3.0.1 Assembled buildings with steel structure shall use the method of system integration to coordinate design, production and transport, construction and erection and use and maintenance as a whole, so that the whole process is carried out in concert.

3.0.2 Assembled buildings with steel structure shall follow the requirements of generalisation, modularisation and standardisation and, on the principle of few specifications and many combinations, shall achieve a range and a variety of buildings and of parts and components.

3.0.3 The factory production of parts and components shall have a complete production quality management system in place, shall provide product identification, shall raise production accuracy and shall secure product quality.

3.0.4 Assembled buildings with steel structure shall coordinate the architectural, structural, mechanical, interior decoration and other disciplines as a whole, shall draw up a construction organisation scheme in which they work in concert and shall use assembled construction, so that the quality of the works is secured and labour efficiency raised.

3.0.5 Assembled buildings with steel structure shall be fully decorated, and the interior decoration system shall be designed and built as one with the structure system, the building envelope system and the facility and pipeline system.